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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/675,464      | 09/28/2000  | Monica G. Varriale   | KCX-197 (14737)     | 8920             |

7590

07/22/2003

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EXAMINER

LITHGOW, THOMAS M

ART UNIT

PAPER NUMBER

1724

DATE MAILED: 07/22/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/675,464

Applicant(s)

VARRIALE ET AL.

Examiner

Thomas M. Lithgow

Art Unit

1724

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 09 June 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 18-29 is/are pending in the application.
- 4a) Of the above claim(s) none is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 18-29 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 9 and 13.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: *THM-Lit*

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 28 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It appears claim 28 should be dependent from claim 24 not 27. Claim 27 claims a third stage before the first while claim 28- dependent from claim 27- claims a third stage after the first stage. These are mutually exclusive embodiments of the invention.

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application

by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

1. Claims 18-23 and 29 are rejected under 35 U.S.C. 102(e) as being anticipated by Williamson et al. (US 6274041).

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131. Williamson discloses a two step filter process in which a first stage filter

removes bacteria via a porous charge modified meltblown nonwoven glass web. The final stage is an activated carbon stage. Applicant appears to have addressed the reference to Pall (US 4523995) in the response of 06-09-2003. The claims are rejected over Williamson (US6274041). To the extent that Williamson discloses a third filter step, it does not negate the teaching of a two step filtration and the language "consisting essentially of" does not overcome the rejection.

2. Claims 18, 22-25 and 27-29 are rejected under 35 U.S.C. 102(b) as being anticipated by Klein (US 3705651). Klein '651 discloses a three step filter device in which the first step is an outer layer of diatomaceous earth which collects the major portion of bacteria, a second stage 13 made of glass fibers with diatomaceous earth impregnated therewith which removes some of the bacteria, and a third final layer of activated carbon to absorb organics and micropollution. Since the presence of an additional filter layer does not materially effect the novel and inventive idea of removing the bacteria before subjecting the water free of bacteria to an activated carbon step then the language "consisting essentially of" does not define over Klein '651 either. Since either of the first two stages removes "at least a portion" of the bacteria than either one of claims 27 or 28.

3. Claims 18, 20, 22-27 and 29 are rejected under 35 U.S.C. 102(b) as being anticipated by Pall (US 3327859). Pall '859 discloses a two step process for purifying water including a first step of employing a microporous layer of asbestos or glass fibers (col. 4, lines 72) over paper with silver bromide coated thereon (filter element 1) for the clear purpose of removing any bacteria prior to the activated carbon second stage 15. An optional external stage coarse filter 23.

4. Claims 18, 23-25 and 27-29 are rejected under 35 U.S.C. 102(b) as being anticipated by any one of Galbiati (US 4595500) or Kuh (US 4681677) or Bray (US 4711723) or Bosko (US 5004535). Galbiati '500 discloses a fine mesh filter 25 prior to membrane filter 23 for bacterial removal to keep the down stream activated carbon free of bacteria , followed by the activated carbon stage 31 for removal of chlorinated byproducts. Kuh '677 discloses a submicron filter which captures all the bacteria, and cysts not captured by prefilter 48, before subjecting the water to an activated carbon stage at 71 (col. 6, line 68). Bray '723 discloses a reverse osmosis filter 14 which removes bacteria and viruses (1, 23-1,30) prior to two activated carbon stages 25 and 29. Bosko '535 discloses an

prefilter 20, a reverse osmosis membrane stage<sup>21</sup> for removing bacteria and viruses – col. 1, lines 20-30, and a final activated carbon stage 22.

5. Claims 18, 23 and 29 are rejected under 35 U.S.C. 102(b) as being anticipated by Sabo (US 3372808). Sabo discloses the use of a ceramic filter 6 which is made of diatomaceous earth and impregnated with silver to remove solids and bacteria (col. 5, lines 12+). This stage is followed by activated carbon found inside of the ceramic outer filter.

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 19 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pall (US 3327859) as applied to claim 18 above, and further in view of any one of Pall 4523995 or Cotton 5688588 or WO98/04335. Pall '859 discloses the two step process of removing bacteria in a first filter step followed by filtering with activated carbon in a second filtering step. The first step includes employing, inter alia, a

microfiber glass web for removing bacteria and a further teaching that the "filter assembly can employ any type of microporous filter element whose pore diameter is sufficiently small to remove harmful bacteria and other pathogenic organisms"- col. 3, lines 60-64. The three secondary patents teach the use of charge modified meltblown microfiber glass filters which function to filter water and remove such harmful bacteria from the water. To employ such a known and similar material for the same function as the microfiber glass web in Pall '859 would have been obvious to one of ordinary skill in the art.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas M. Lithgow whose telephone number is 703-308-0173. The examiner can normally be reached on Mon. -Fri..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Blain Copenheaver can be reached on 703-308-1261. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-3602 for regular communications and 305-3599 for After Final communications.



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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

A handwritten signature in black ink, appearing to read 'T.M. Lithgow', written in a cursive style.

Thomas M. Lithgow  
Primary Examiner  
Art Unit 1724

TML  
July 17, 2003